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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,429	07/31/2001	Ian J. Sherlock	TI-30293	4195

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EXAMINER	
KUMAR, PANKAJ	

ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,429	SHERLOCK, IAN J.	
	Examiner	Art Unit	
	Pankaj Kumar	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,8,10 and 16-21* is/are rejected.

7)☒ Claim(s) *2-7,9 and 11-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/7/2002*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it contains legal terminology such as the word "comprises". Correction is required. See MPEP § 608.01(b).

2. It is suggested that the word "comprises" (beginning of the 5th line and end of the 8th line of the abstract) be changed to 'has'.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 8, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHale USPN 6014431 in view of Liu USPN 6349096. Here is how the references teach the claims:

5. As per claim 1: A DSL modem, comprising: a connector comprising a first pair of conductors and a second pair of conductors (McHale 6014431 col. 1 line 66 to col. 2 line 1; fig. 3: lines 102 in element 100; fig. 4: 54, 152, 150, 154, 156, m, 70); circuitry for transmitting according to a DSL protocol (McHale 6014431 col. 2 lines 2-3, col. 4 lines 51-67); circuitry for receiving according to a DSL protocol (McHale 6014431 col. 2 lines 2-3, col. 4 lines 51-67); switching circuitry operable to selectively switch to a first position - to couple - the circuitry for transmitting and the circuitry for receiving to the first pair of conductors - and to a second

position - to couple - the circuitry for transmitting and the circuitry for receiving to the second pair of conductors (McHale 6014431 fig. 3: 100; figs. 2, 4: 70; fig. 10a: 502; fig. 14b: 658; col. 8 lines 48-57); and circuitry for controlling the switching circuitry to switch to one of the first position and the second position (McHale fig. 3: connection between 104 and 108 are controlling to switch to the positions; controller 80 and output 84 in figs. 2, 3) and for then detecting whether DSL service exists (McHale fig. 10a: detector 508 detects line interface 500 but does not teach detecting whether DSL service exists but it would be obvious for it to teach this as explained below) along the pair of conductors to which the circuitry for transmitting and the circuitry for receiving is then coupled (McHale fig. 10a: 54, col. 1 line 66 to col. 2 line 1: each line interface is coupled to a receive data pair and a transmit data pair) (McHale 6014431 figs. 7, 9: 402, 410, selecting active nondedicated lines).

6. McHale does not teach detecting whether DSL service exists. Liu 6349096 teaches detecting whether DSL service exists (Liu col. 8 lines 39-50, fig. 4a: 403: detecting whether DSL tone exists). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the detecting whether DSL service exists as indicated by the instant claims, because the combined teaching of McHale with Liu suggests detecting whether DSL service exists as indicated by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of McHale with Liu because McHale suggests selecting active nondedicated lines (something broad) in general and Liu suggests the beneficial use of routing based on the detection of whether DSL service exists such as if it is analog voice instead of DSL, the system will route communications outside of the DSL system (Liu col. 8 lines 44-50) in the analogous art of determining whether DSL exists.

7. As per claim 8: The DSL modem of claim 1 wherein the circuitry for controlling the switching controls the switching circuitry to toggle between the first position and the second position a plurality of times (McHale fig. 3: switch 100 will switch between various two positions a number of times as the systems operates), and for each toggle operate the circuitry for detecting whether DSL service exists along the pair of conductors (Liu col. 8 lines 39-50, fig. 4a: 403: detecting whether DSL tone exists) to which the circuitry for transmitting and the circuitry for receiving is then coupled (McHale 6014431 fig. 3: 100; figs. 2, 4: 70; fig. 10a: 502; fig. 14b: 658).

8. As per claim 16: The DSL modem of claim 1 wherein the circuitry for transmitting and receiving comprises a digital signal processor (McHale col. 8 line 67; fig. 11c: 608).

9. As per claim 17: The DSL modem of claim 1 wherein the circuitry for controlling the switching circuitry and the circuitry for transmitting and receiving comprises a digital signal processor. McHale in view of Liu teaches the DSL modem of claim 1 wherein the circuitry for transmitting and receiving comprises a digital signal processor (McHale col. 8 line 67: "digital information generated by transceiver 108"; examiner interprets signal processor as information generator). What McHale in view of Liu does not teach is wherein the circuitry for controlling the switching circuitry comprises a digital signal processor. It is common knowledge that for a system to function, when there is data, it will process it and also that data is a signal. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to modify the prior art teaching of McHale in view of Liu with the circuitry for controlling the switching circuitry comprises a digital signal processor as recited by the instant claims, because McHale in view of Liu suggests communication server 58 detects a need for data via a digital

protocol (McHale col. 8 lines 34-39 which is paragraph 26) and McHale shows the controller 80 is in 58 in fig. 2 and shows the switching 100 is in 80 in the analogous art of switching in DSL.

10. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHale USPN 6014431 in view of Liu USPN 6349096 as applied to claim 1 above, and further in view of Erekson USPN 6826174. Here is how the references teach the claims:

11. As per claim 18, McHale in view of Liu teaches the DSL modem of claim 1. McHale in view of Liu does not teach wherein the connector comprises an RJII type connector. Erekson 6826174 teaches an RJII type connector (Erekson col. 8 line 38). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the RJII type connector as recited by the instant claims, because the combined teaching of McHale in view of Liu with Erekson suggest a DSL modem with a RJII type connector as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of McHale in view of Liu with Erekson because McHale in view of Liu suggests connecting a DSL modem (something broad) in general and Erekson suggests the beneficial use of connecting a DSL modem with a RJII type connector (such as this connector connects to a standard telephone (Erekson col. 8 lines 38-39) and such connections are widely prevalent in homes and offices) in the analogous art of DSL.

12. As per claim 19: The DSL modem of claim 18: wherein the first pair of conductors comprises an inner pair of pins; and wherein the second pair of conductors comprises an outer pair of pins. McHale in view of Liu and further in view of Erekson teaches claim 18 as discussed above with a plurality of pairs of conductors and pins (McHale col. 2 lines 21-28, col.

1 line 60, 66 to col. 2 line 18; col. 8 line 52 has contact terminals which are pins used to make contact). McHale in view of Liu and further in view of Erekson does not teach the that the first pair of conductors comprise an inner and the second pair of conductors comprise an outer. The office takes official notice that when conductors or wires are together, some will be on the inner side and other will be on the outer side as no two conductors or wires can occupy the same space at the same time. Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to modify the prior art teaching of McHale in view of Liu and further in view of Erekson with conductors comprising inner and outer locations as indicated by the instant claims, because McHale in view of Liu and further in view of Erekson suggests groups of conductors or wires together which would force some to be inner and some to be outer and it is a matter of design choice which ones are inner and which are outer as applicant has not disclosed that this feature provides an advantage, is used for a particular purpose or solves a stated problem.

13. As per claim 20: The DSL modem of claim 18: wherein the first pair of conductors comprises an outer pair of pins; and wherein the second pair of conductors comprises an inner pair of pins. McHale in view of Liu and further in view of Erekson teaches claim 18 as discussed above with a plurality of pairs of conductors and pins (McHale col. 2 lines 21-28, col. 1 line 60, 66 to col. 2 line 18; col. 8 line 52 has contact terminals which are pins used to make contact). McHale in view of Liu and further in view of Erekson does not teach the that the first pair of conductors comprise an inner and the second pair of conductors comprise an outer. It is common knowledge that when conductors or wires are together, some will be on the inner side and other will be on the outer side. Thus, it would have been obvious, to one of ordinary skill in

the art, at time the invention was made, to modify the prior art teaching of McHale in view of Liu and further in view of Erekson with conductors comprising inner and outer locations as indicated by the instant claims, because McHale in view of Liu and further in view of Erekson suggests groups of conductors or wires together which would force some to be inner and some to be outer and it is a matter of design choice which ones are inner and which are outer as applicant has not disclosed that this feature provides an advantage, is used for a particular purpose or solves a stated problem.

14. Claims 10, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHale USPN 6014431 in view of Liu USPN 6349096 as applied to claim 1 above, and further in view of Bingel USPN 6744883. Here is how the references teach the claims:

15. As per claim 10, McHale in view of Liu teaches the DSL modem of claim 1. What McHale in view of Liu does not teach is wherein the switching circuitry comprises an electromechanical switch. Bingel 6744883 teaches electromechanical switches (Bingel col. 3 lines 5-58). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the switching circuitry comprises an electromechanical switch as recited by the instant claims, because the combined teaching of McHale in view of Liu with Bingel suggest the switching circuitry comprises an electromechanical switch as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of McHale in view of Liu with Bingel because McHale in view of Liu suggests switching (something broad) in general and Bingel suggests the beneficial use of an electromechanical switch such as to notify about events in a telephone network using call-

state/line-state signaling messages in a subscriber loop (Bingel col. 3 lines 44-50) in the analogous art of DSL (Bingel col. 3 line 2).

16. As per claim 21, McHale in view of Liu teaches the DSL modem of claim 1. What McHale in view of Li does not teach is wherein the switching circuitry comprises an electronic switch. Bingel 6744883 teaches electronic switch (Bingel col. 8 line 66). Thus, it would have been obvious, to one of ordinary skill in the art, at time the invention was made, to arrive at the switching circuitry comprises an electronic switch as recited by the instant claims, because the combined teaching of McHale in view of Liu with Bingel suggest the switching circuitry comprises an electronic switch as recited by the instant claims. Furthermore, one of ordinary skill in the art, would have been motivated to combine the teachings of McHale in view of Liu with Bingel because McHale in view of Liu suggests switching (something broad) in general and Bingel suggests the beneficial use of an electronic switch such as to notify about events in a telephone network using call-state/line-state signaling messages in a subscriber loop (Bingel col. 3 lines 44-50) in the analogous art of DSL (Bingel col. 3 line 2).

Allowable Subject Matter

17. Claims 2-7, 9, 11-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (571) 272-3011. The examiner can normally be reached on Mon, Tues, Thurs and Fri after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pankaj Kumar
Patent Examiner
Art Unit 2631

PK